NCBI PubMed National Library of Medicine NLM

PubMed Nucleotide Protein Genome Structure PopSet Taxonomy OMIM Books

Search PubMed for Doyle RJ[au] Go Clear

Limits Preview/Index History Clipboard Details

Display Summary Sort Save Text Clip Add Order

Show: 50 Items 1-50 of 162 Page 1 of 4 Select page: 1 2 3 4

Entrez PubMed

PubMed Services

Related Resources

1: Kolganova TV, Ermolaev AV, Doyle RJ. Related Articles, Links
Effects of asparaginase and polyphenol oxidase on adhesive characteristics of microorganisms.
Bull Exp Biol Med. 2002 Jan;133(1):58-61.
PMID: 12170308 [PubMed - in process]

2: Sethman CR, Doyle RJ, Cowan MM. Related Articles, Links
Flow cytometric evaluation of adhesion of Streptococcus pyogenes to epithelial cells.
J Microbiol Methods. 2002 Sep;51(1):35-42.
PMID: 12069888 [PubMed - indexed for MEDLINE]

3: Calamita HG, Doyle RJ. Related Articles, Links
Regulation of autolysins in teichuronic acid-containing Bacillus subtilis cells.
Mol Microbiol. 2002 May;44(3):601-6.
PMID: 11994144 [PubMed - indexed for MEDLINE]

4: Doyle RJ, Kan T. Related Articles, Links
Interaction between concanavalin A and heparin.
FEBS Lett. 1972 Jan 15;20(1):22-24. No abstract available.
PMID: 11946372 [PubMed - as supplied by publisher]

5: Thongboonkerd V, Luengpailin J, Cao J, Pierce WM, Cai J, Klein JB, Doyle RJ. Related Articles, Links
Fluoride exposure attenuates expression of Streptococcus pyogenes virulence factors.
J Biol Chem. 2002 May 10;277(19):16599-605.
PMID: 11867637 [PubMed - indexed for MEDLINE]

6: Thuan BP, Calderon de la Barca AM, Buck G, Galsworthy SB, Doyle RJ. Related Articles, Links
Interactions between listeriae and lectins.
Roum Arch Microbiol Immunol. 2000 Jan-Jun;59(1-2):55-61.
PMID: 11845476 [PubMed - indexed for MEDLINE]

7: Cao J, Doyle RJ. Related Articles, Links
Fluoride modifies adhesion of Streptococcus pyogenes.
FEMS Immunol Med Microbiol. 2002 Jan 14;32(2):175-7.
PMID: 11821240 [PubMed - indexed for MEDLINE]

8: Stavri H, Beveridge TJ, Moyles D, Athamna A, Doyle RJ. Related Articles, Links

Hemagglutinin of unusual specificity from Helcococcus kunzii.
Arch Microbiol. 2002 Feb;177(2):197-9.
PMID: 11807570 [PubMed - indexed for MEDLINE]

☐ **9:** Calamita HG, Ehringer WD, Koch AL, Doyle RJ. Related Articles, Links
Evidence that the cell wall of Bacillus subtilis is protonated during respiration.
Proc Natl Acad Sci U S A. 2001 Dec 18;98(26):15260-3.
PMID: 11752466 [PubMed - indexed for MEDLINE]

☐ **10:** Noor AK, Doyle RJ, Venneri SL. Related Articles, Links
Bringing life to space exploration.
Aerosp Am. 1999 Nov;37(11):28-33. No abstract available.
PMID: 11542653 [PubMed - indexed for MEDLINE]

☐ **11:** Doyle RJ. Related Articles, Links
Stains in microbiology and molecular biology.
Biotech Histochem. 2001 May;76(3):109. No abstract available.
PMID: 11475312 [PubMed - indexed for MEDLINE]

☐ **12:** Luengpailin S, Luengpailin J, Doyle RJ. Related Articles, Links
Detection of streptococcal glucan-binding proteins in biofilms.
Methods Enzymol. 2001;337:434-9. No abstract available.
PMID: 11398450 [PubMed - indexed for MEDLINE]

☐ **13:** Goh CT, Taweechaisupapong S, Taylor KG, Doyle RJ. Related Articles, Links
Polycarboxylates inhibit the glucan-binding lectin of Streptococcus sobrinus.
Biochim Biophys Acta. 2000 Sep 1;1523(1):111-6.
PMID: 11099864 [PubMed - indexed for MEDLINE]

☐ **14:** Cowan MM, Horst EA, Luengpailin S, Doyle RJ. Related Articles, Links
Inhibitory effects of plant polyphenoloxidase on colonization factors of Streptococcus sobrinus 6715.
Antimicrob Agents Chemother. 2000 Sep;44(9):2578-80.
PMID: 10952624 [PubMed - indexed for MEDLINE]

☐ **15:** Taweechaisupapong S, Doyle RJ. Related Articles, Links
Sensitivity of bacterial coaggregation to chelating agents.
FEMS Immunol Med Microbiol. 2000 Aug;28(4):343-6.
PMID: 10891659 [PubMed - indexed for MEDLINE]

☐ **16:** Doyle RJ. Related Articles, Links
Contribution of the hydrophobic effect to microbial infection.
Microbes Infect. 2000 Apr;2(4):391-400. Review.
PMID: 10817641 [PubMed - indexed for MEDLINE]

☐ **17:** Luengpailin S, Banas JA, Doyle RJ. Related Articles, Links
Modulation of glucan-binding protein activity in streptococci by fluoride.
Biochim Biophys Acta. 2000 May 1;1474(3):346-52.
PMID: 10779686 [PubMed - indexed for MEDLINE]

☐ **18:** Luengpailin J, Doyle RJ. Related Articles, Links
Glycine prevents the phenotypic expression of streptococcal glucan-binding lectin.

Biochim Biophys Acta. 2000 Apr 6;1474(2):212-8.
PMID: 10742601 [PubMed - indexed for MEDLINE]

☐ **19:** Reyes GF, Corbett D, Benz FW, Doyle RJ. Related Articles, Links
Acrylonitrile induces autolysis Bacillus subtilis.
FEMS Microbiol Lett. 2000 Jan 15;182(2):255-8.
PMID: 10620675 [PubMed - indexed for MEDLINE]

☐ **20:** Srisatjaluk R, Doyle RJ, Justus DE. Related Articles, Links
Outer membrane vesicles of Porphyromonas gingivalis inhibit IFN-gamma-mediated MHC class II expression by human vascular endothelial cells.
Microb Pathog. 1999 Aug;27(2):81-91.
PMID: 10458919 [PubMed - indexed for MEDLINE]

☐ **21:** Ciopraga J, Gozia O, Tudor R, Brezuica L, Doyle RJ. Related Articles, Links
Fusarium sp. growth inhibition by wheat germ agglutinin.
Biochim Biophys Acta. 1999 Aug 5;1428(2-3):424-32.
PMID: 10434062 [PubMed - indexed for MEDLINE]

☐ **22:** Cox SD, Lassiter MO, Miller BS, Doyle RJ. Related Articles, Links
A new mechanism of action of fluoride on streptococci.
Biochim Biophys Acta. 1999 Aug 5;1428(2-3):415-23.
PMID: 10434061 [PubMed - indexed for MEDLINE]

☐ **23:** Koch AL, Doyle RJ. Related Articles, Links
Attachment of the chromosome to the cell poles: the strategy for the growth of bacteria in two and three dimensions.
J Theor Biol. 1999 Jul 21;199(2):213-21.
PMID: 10395815 [PubMed - indexed for MEDLINE]

☐ **24:** Zhou L, Srisatjaluk R, Justus DE, Doyle RJ. Related Articles, Links
On the origin of membrane vesicles in gram-negative bacteria.
FEMS Microbiol Lett. 1998 Jun 15;163(2):223-8.
PMID: 9673026 [PubMed - indexed for MEDLINE]

☐ **25:** Denson AM, Doyle RJ. Related Articles, Links
Stabilization of the glucan-binding lectin of Streptococcus sobrinus by specific ligand.
Arch Oral Biol. 1998 Jan;43(1):33-8.
PMID: 9569988 [PubMed - indexed for MEDLINE]

☐ **26:** Lee W, De La Barca AM, Drake D, Doyle RJ. Related Articles, Links
Lectin-oral streptococci interactions.
J Med Microbiol. 1998 Jan;47(1):29-37.
PMID: 9449947 [PubMed - indexed for MEDLINE]

☐ **27:** Sokurenko EV, Chesnokova V, Doyle RJ, Hasty DL. Related Articles, Links
Diversity of the Escherichia coli type 1 fimbrial lectin. Differential binding to mannosides and uroepithelial cells.
J Biol Chem. 1997 Jul 11;272(28):17880-6.
PMID: 9211945 [PubMed - indexed for MEDLINE]

☐ **28:** Popescu A, Doyle RJ. Related Articles, Links

The Gram stain after more than a century.
Biotech Histochem. 1996 May;71(3):145-51. Review.
PMID: 8724440 [PubMed - indexed for MEDLINE]

☐ **29:** Ma Y, Lassiter MO, Banas JA, Galperin MY, Taylor KG, Doyle RJ. Related Articles, Links

Multiple glucan-binding proteins of Streptococcus sobrinus.
J Bacteriol. 1996 Mar;178(6):1572-7.
PMID: 8626283 [PubMed - indexed for MEDLINE]

☐ **30:** Wang Q, Singh S, Taylor KG, Doyle RJ. Related Articles, Links

Anti-adhesins of Streptococcus sobrinus.
Adv Exp Med Biol. 1996;408:249-62. Review. No abstract available.
PMID: 8895800 [PubMed - indexed for MEDLINE]

☐ **31:** Singh J, Sonnenfeld G, Doyle RJ. Related Articles, Links

Tetranitromethane as a broad spectrum disinfectant.
Microbios. 1996;85(345):251-6.
PMID: 8699967 [PubMed - indexed for MEDLINE]

☐ **32:** Wang J, Singh S, Taylor KG, Doyle RJ. Related Articles, Links

Streptococcal glucan-binding lectins do not recognize methylated alpha-1,6 glucans.
Glycoconj J. 1995 Apr;12(2):109-12.
PMID: 7542513 [PubMed - indexed for MEDLINE]

☐ **33:** Wu Q, Wang Q, Taylor KG, Doyle RJ. Related Articles, Links

Subinhibitory concentrations of antibiotics affect cell surface properties of Streptococcus sobrinus.
J Bacteriol. 1995 Mar;177(5):1399-401.
PMID: 7868618 [PubMed - indexed for MEDLINE]

☐ **34:** Galperin MY, Lassiter M, Ma Y, Taylor KG, Doyle RJ. Related Articles, Links

Chemiluminescent detection of dextran bound to streptococcal glucan-binding lectin.
Anal Biochem. 1995 Feb 10;225(1):185-7. No abstract available.
PMID: 7539984 [PubMed - indexed for MEDLINE]

☐ **35:** Ness-Greenstein RB, Rosenberg M, Doyle RJ, Kaplan N. Related Articles, Links

DNA from Serratia marcescens confers a hydrophobic character in Escherichia coli.
FEMS Microbiol Lett. 1995 Jan 1;125(1):71-5.
PMID: 7867922 [PubMed - indexed for MEDLINE]

☐ **36:** Ciopraga J, Motas C, Doyle RJ. Related Articles, Links

Inhibition of saliva-induced oral streptococcal aggregation by blood group glycoproteins.
FEMS Immunol Med Microbiol. 1995 Jan;10(2):145-9.
PMID: 7719283 [PubMed - indexed for MEDLINE]

☐ **37:** Doyle RJ, Rosenberg M. Related Articles, Links

Measurement of microbial adhesion to hydrophobic substrata.
Methods Enzymol. 1995;253:542-50. No abstract available.
PMID: 7476418 [PubMed - indexed for MEDLINE]

☐ **38:** Schilling KM, Doyle RJ. Related Articles, Links

Bacterial adhesion to hydroxylapatite.
Methods Enzymol. 1995;253:536-42. No abstract available.
PMID: 7476417 [PubMed - indexed for MEDLINE]

☐ **39:** Singh JS, Sonnenfeld G, Doyle RJ. Related Articles, Links

Tetranitromethane as a surface antiviral disinfectant.
Antiviral Res. 1994 Dec;25(3-4):281-5.
PMID: 7710274 [PubMed - indexed for MEDLINE]

☐ **40:** Cox SD, Lassiter MO, Taylor KG, Doyle RJ. Related Articles, Links

Fluoride inhibits the glucan-binding lectin of Streptococcus sobrinus.
FEMS Microbiol Lett. 1994 Nov 1;123(3):331-4.
PMID: 7988914 [PubMed - indexed for MEDLINE]

☐ **41:** Doyle RJ, Marquis RE. Related Articles, Links

Elastic, flexible peptidoglycan and bacterial cell wall properties.
Trends Microbiol. 1994 Feb;2(2):57-60. Review.
PMID: 8162443 [PubMed - indexed for MEDLINE]

☐ **42:** Mollerach ME, Kemper MA, Gutkind GO, Doyle RJ. Related Articles, Links

[The control of cellular autolysis in bacteria]
Rev Argent Microbiol. 1994 Jan-Mar;26(1):42-53. Review. Spanish. No abstract available.
PMID: 7938500 [PubMed - indexed for MEDLINE]

☐ **43:** Kemper MA, Urrutia MM, Beveridge TJ, Koch AL, Doyle RJ. Related Articles, Links

Proton motive force may regulate cell wall-associated enzymes of Bacillus subtilis.
J Bacteriol. 1993 Sep;175(17):5690-6.
PMID: 8396121 [PubMed - indexed for MEDLINE]

☐ **44:** Singh JS, Taylor KG, Doyle RJ. Related Articles, Links

Essential amino acids involved in glucan-dependent aggregation of Streptococcus sobrinus.
Carbohydr Res. 1993 May 21;244(1):137-47.
PMID: 8339298 [PubMed - indexed for MEDLINE]

☐ **45:** Van der Mei HC, Cox SD, Geertsema-Doornbusch GI, Doyle RJ, Busscher HJ. Related Articles, Links

A critical appraisal of positive cooperativity in oral streptococcal adhesion: Scatchard analyses of adhesion data versus analyses of the spatial arrangement of adhering bacteria.
J Gen Microbiol. 1993 May;139 (Pt 5):937-48.
PMID: 8336110 [PubMed - indexed for MEDLINE]

☐ **46:** Wu TL, Koch AL, Doyle RJ. Related Articles, Links

Anomalies in cell wall turnover associated with the growth temperature of Bacillus subtilis.
Biochim Biophys Acta. 1993 Feb 13;1156(2):173-80.
PMID: 8094013 [PubMed - indexed for MEDLINE]

☐ **47:** Bauer PD, Trapp C, Drake D, Taylor KG, Doyle RJ. Related Articles, Links

Acquisition of manganous ions by mutans group streptococci.
J Bacteriol. 1993 Feb;175(3):819-25.
PMID: 8380803 [PubMed - indexed for MEDLINE]

☐ **48:** Lu-Lu, Singh JS, Galperin MY, Drake D, Taylor KG, Doyle RJ. Related Articles, Links
Chelating agents inhibit activity and prevent expression of streptococcal glucan-binding lectins.
Infect Immun. 1992 Sep;60(9):3807-13.
PMID: 1500189 [PubMed - indexed for MEDLINE]

☐ **49:** Garber N, Guempel U, Belz A, Gilboa-Garber N, Doyle RJ. Related Articles, Links
On the specificity of the D-galactose-binding lectin (PA-I) of Pseudomonas aeruginosa and its strong binding to hydrophobic derivatives of D-galactose and thiogalactose.
Biochim Biophys Acta. 1992 Jun 12;1116(3):331-3.
PMID: 1610890 [PubMed - indexed for MEDLINE]

☐ **50:** Hasty DL, Ofek I, Courtney HS, Doyle RJ. Related Articles, Links
Multiple adhesins of streptococci.
Infect Immun. 1992 Jun;60(6):2147-52. Review. No abstract available.
PMID: 1587582 [PubMed - indexed for MEDLINE]

Display Summary Sort Save Text Clip Add Order
Show: 50 Items 1-50 of 162 Page 1 of 4 Select page: 1 2 3 4

NCBI PubMed National Library of Medicine NLM

PubMed Nucleotide Protein Genome Structure PopSet Taxonomy OMIM Books

Search PubMed for Doyle RJ[au] Go Clear

Limits Preview/Index History Clipboard Details

Display Summary Sort Save Text Clip Add Order

Show: 50 Items 51-100 of 162 Page 2 of 4 Select page: 1 2 3 4

Entrez PubMed

PubMed Services

Related Resources

51: Ekwunife FS, Singh J, Taylor KG, Doyle RJ. Related Articles, Links

Isolation and purification of cell wall polysaccharide of Bacillus anthracis (delta Sterne).
FEMS Microbiol Lett. 1991 Aug 15;66(3):257-62.
PMID: 1769521 [PubMed - indexed for MEDLINE]

52: Goldberg S, Doyle RJ, Rosenberg M. Related Articles, Links

Mechanism of enhancement of microbial cell hydrophobicity by cationic polymers.
J Bacteriol. 1990 Oct;172(10):5650-4.
PMID: 2211502 [PubMed - indexed for MEDLINE]

53: Zhang XH, Rosenberg M, Doyle RJ. Related Articles, Links

Inhibition of the cooperative adhesion of Streptococcus sanguis to hydroxylapatite.
FEMS Microbiol Lett. 1990 Sep 15;59(3):315-8.
PMID: 2177022 [PubMed - indexed for MEDLINE]

54: Slifkin M, Doyle RJ. Related Articles, Links

Lectins and their application to clinical microbiology.
Clin Microbiol Rev. 1990 Jul;3(3):197-218. Review.
PMID: 2200603 [PubMed - indexed for MEDLINE]

55: McAlister D, Nambiar S, Taylor KG, Doyle RJ. Related Articles, Links

Glucosyltransferases of Streptococcus sobrinus C211 are both stimulated and inhibited by hydrogen peroxide.
Oral Microbiol Immunol. 1989 Sep;4(3):146-52.
PMID: 2534763 [PubMed - indexed for MEDLINE]

56: McAlister D, Doyle RJ, Taylor KG. Related Articles, Links

Inhibition by maltose, isomaltose, and nigerose of the synthesis of high-molecular-weight D-glucans by the D-glucosyltransferases of Streptococcus sobrinus.
Carbohydr Res. 1989 Apr 1;187(1):131-8.
PMID: 2526680 [PubMed - indexed for MEDLINE]

57: Doyle RJ, Sonnenfeld EM. Related Articles, Links

Properties of the cell surfaces of pathogenic bacteria.
Int Rev Cytol. 1989;118:33-92. Review. No abstract available.
PMID: 2691428 [PubMed - indexed for MEDLINE]

58: Doyle RJ, Chaloupka J, Vinter V. Related Articles, Links

Turnover of cell walls in microorganisms.
Microbiol Rev. 1988 Dec;52(4):554-67. Review. No abstract available.
PMID: 3070324 [PubMed - indexed for MEDLINE]

☐ **59:** Cowan MM, Parrish K, Kessler RE, Pyle C Jr, Taylor KG, Ciardi JE, Doyle RJ. Related Articles, Links

Glucan-binding factor in saliva.
Infect Immun. 1988 Nov;56(11):2912-7.
PMID: 3169992 [PubMed - indexed for MEDLINE]

☐ **60:** Kirchner G, Kemper MA, Koch AL, Doyle RJ. Related Articles, Links

Zonal turnover of cell poles of Bacillus subtilis.
Ann Inst Pasteur Microbiol. 1988 Nov-Dec;139(6):645-54.
PMID: 3150939 [PubMed - indexed for MEDLINE]

☐ **61:** Drake D, Taylor KG, Doyle RJ. Related Articles, Links

Expression of the glucan-binding lectin of Streptococcus cricetus requires manganous ion.
Infect Immun. 1988 Aug;56(8):2205-7.
PMID: 3397191 [PubMed - indexed for MEDLINE]

☐ **62:** Drake D, Taylor KG, Bleiweis AS, Doyle RJ. Related Articles, Links

Specificity of the glucan-binding lectin of Streptococcus cricetus.
Infect Immun. 1988 Aug;56(8):1864-72.
PMID: 3397177 [PubMed - indexed for MEDLINE]

☐ **63:** Eaves DJ, Doyle RJ. Related Articles, Links

Surface characteristics of Pseudomonas cepacia.
Microbios. 1988;53(215):119-28.
PMID: 3374397 [PubMed - indexed for MEDLINE]

☐ **64:** Cowan MM, Taylor KG, Doyle RJ. Related Articles, Links

Role of sialic acid in the kinetics of Streptococcus sanguis adhesion to artificial pellicle.
Infect Immun. 1987 Jul;55(7):1552-7.
PMID: 3596799 [PubMed - indexed for MEDLINE]

☐ **65:** Cowan MM, Taylor KG, Doyle RJ. Related Articles, Links

Energetics of the initial phase of adhesion of Streptococcus sanguis to hydroxylapatite.
J Bacteriol. 1987 Jul;169(7):2995-3000.
PMID: 3036767 [PubMed - indexed for MEDLINE]

☐ **66:** Doyle RJ, Koch AL. Related Articles, Links

The functions of autolysins in the growth and division of Bacillus subtilis.
Crit Rev Microbiol. 1987;15(2):169-222. Review.
PMID: 3123142 [PubMed - indexed for MEDLINE]

☐ **67:** Cowan MM, Taylor KG, Doyle RJ. Related Articles, Links

Kinetic analysis of Streptococcus sanguis adhesion to artificial pellicle.
J Dent Res. 1986 Oct;65(10):1278-83.
PMID: 3020104 [PubMed - indexed for MEDLINE]

☐ **68:** Burnett AM, Ezzell JW Jr, Singh J, Zipperle GF Jr, Doyle RJ. Related Articles, Links
Induced release of Bacillus spores from sporangia by sodium sulphate.
J Appl Bacteriol. 1986 Apr;60(4):337-9.
PMID: 3087932 [PubMed - indexed for MEDLINE]

☐ **69:** Doyle RJ, Lee NC. Related Articles, Links
Microbes, warfare, religion, and human institutions.
Can J Microbiol. 1986 Mar;32(3):193-200.
PMID: 3518891 [PubMed - indexed for MEDLINE]

☐ **70:** Oakley JD, Taylor KG, Doyle RJ. Related Articles, Links
Trypsin-susceptible cell surface characteristics of Streptococcus sanguis.
Can J Microbiol. 1985 Dec;31(12):1103-7.
PMID: 3006899 [PubMed - indexed for MEDLINE]

☐ **71:** Koch AL, Doyle RJ. Related Articles, Links
Inside-to-outside growth and turnover of the wall of gram-positive rods.
J Theor Biol. 1985 Nov 7;117(1):137-57.
PMID: 3935878 [PubMed - indexed for MEDLINE]

☐ **72:** Garber N, Sharon N, Shohet D, Lam JS, Doyle RJ. Related Articles, Links
Contribution of hydrophobicity to hemagglutination reactions of Pseudomonas aeruginosa.
Infect Immun. 1985 Oct;50(1):336-7.
PMID: 3930405 [PubMed - indexed for MEDLINE]

☐ **73:** Sonnenfeld EM, Beveridge TJ, Doyle RJ. Related Articles, Links
Discontinuity of charge on cell wall poles of Bacillus subtilis.
Can J Microbiol. 1985 Sep;31(9):875-7.
PMID: 3936611 [PubMed - indexed for MEDLINE]

☐ **74:** Sonnenfeld EM, Koch AL, Doyle RJ. Related Articles, Links
Cellular location of origin and terminus of replication in Bacillus subtilis.
J Bacteriol. 1985 Sep;163(3):895-9.
PMID: 3928600 [PubMed - indexed for MEDLINE]

☐ **75:** Sonnenfeld EM, Beveridge TJ, Koch AL, Doyle RJ. Related Articles, Links
Asymmetric distribution of charge on the cell wall of Bacillus subtilis.
J Bacteriol. 1985 Sep;163(3):1167-71.
PMID: 3928597 [PubMed - indexed for MEDLINE]

☐ **76:** Beveridge TJ, Stewart M, Doyle RJ, Sprott GD. Related Articles, Links
Unusual stability of the Methanospirillum hungatei sheath.
J Bacteriol. 1985 May;162(2):728-37.
PMID: 3988711 [PubMed - indexed for MEDLINE]

☐ **77:** Koch AL, Kirchner G, Doyle RJ, Burdett ID. Related Articles, Links
How does a Bacillus split its septum right down the middle?
Ann Inst Pasteur Microbiol. 1985 Jan-Feb;136A(1):91-8.
PMID: 4004149 [PubMed - indexed for MEDLINE]

☐ **78:** Zipperle GF Jr, Ezzell JW Jr, Doyle RJ. Related Articles, Links
Glucosamine substitution and muramidase susceptibility in Bacillus anthracis.
Can J Microbiol. 1984 May;30(5):553-9.
PMID: 6430537 [PubMed - indexed for MEDLINE]

☐ **79:** Sadler DF, Ezzell JW Jr, Keller KF, Doyle RJ. Related Articles, Links
Glycosidase activities of Bacillus anthracis.
J Clin Microbiol. 1984 May;19(5):594-8.
PMID: 6429187 [PubMed - indexed for MEDLINE]

☐ **80:** Mobley HL, Koch AL, Doyle RJ, Streips UN. Related Articles, Links
Insertion and fate of the cell wall in Bacillus subtilis.
J Bacteriol. 1984 Apr;158(1):169-79.
PMID: 6232259 [PubMed - indexed for MEDLINE]

☐ **81:** Doyle RJ, Nedjat-Haiem F, Keller KF, Frasch CE. Related Articles, Links
Diagnostic value of interactions between members of the family Neisseriaceae and lectins.
J Clin Microbiol. 1984 Mar;19(3):383-7.
PMID: 6546936 [PubMed - indexed for MEDLINE]

☐ **82:** Cole HB, Ezzell JW Jr, Keller KF, Doyle RJ. Related Articles, Links
Differentiation of Bacillus anthracis and other Bacillus species by lectins.
J Clin Microbiol. 1984 Jan;19(1):48-53.
PMID: 6418761 [PubMed - indexed for MEDLINE]

☐ **83:** Doyle RJ, Koch AL, Carstens PH. Related Articles, Links
Cell wall-DNA association in Bacillus subtilis.
J Bacteriol. 1983 Mar;153(3):1521-7.
PMID: 6402501 [PubMed - indexed for MEDLINE]

☐ **84:** Jolliffe LK, Langemeier SO, Doyle RJ. Related Articles, Links
Hydrogen ion control of autolysin-dependent functions in Bacillus subtilis.
Microbios. 1983;38(153-154):187-94.
PMID: 6139741 [PubMed - indexed for MEDLINE]

☐ **85:** Nesbitt WE, Doyle RJ, Taylor KG. Related Articles, Links
Hydrophobic interactions and the adherence of Streptococcus sanguis to hydroxylapatite.
Infect Immun. 1982 Nov;38(2):637-44.
PMID: 6292108 [PubMed - indexed for MEDLINE]

☐ **86:** Thaniyavarn S, Taylor KG, Singh S, Doyle RJ. Related Articles, Links
Pyridine analogs inhibit the glucosyltransferase of Streptococcus mutans.
Infect Immun. 1982 Sep;37(3):1101-11.
PMID: 6215355 [PubMed - indexed for MEDLINE]

☐ **87:** Jolliffe LK, Doyle RJ, Streips UN. Related Articles, Links
Extracellular proteases increase tolerance of Bacillus subtilis to nafcillin.
Antimicrob Agents Chemother. 1982 Jul;22(1):83-9.
PMID: 6812497 [PubMed - indexed for MEDLINE]

☐ **88:** Scharff TG, Badr MZ, Doyle RJ. Related Articles, Links

The nature of salicylate inhibition of sugar transport in yeast.
Fundam Appl Toxicol. 1982 Jul-Aug;2(4):168-72.
PMID: 6764430 [PubMed - indexed for MEDLINE]

☐ **89:** Doyle RJ, Sonnenfeld EM, Cost K, Thaniyavarn S. Related Articles, Links

Anti-poly(glycerolphosphate) in human sera.
J Clin Microbiol. 1982 Jun;15(6):1169-71. No abstract available.
PMID: 7107847 [PubMed - indexed for MEDLINE]

☐ **90:** Beveridge TJ, Forsberg CW, Doyle RJ. Related Articles, Links

Major sites of metal binding in Bacillus licheniformis walls.
J Bacteriol. 1982 Jun;150(3):1438-48.
PMID: 7076624 [PubMed - indexed for MEDLINE]

☐ **91:** Doyle RJ, Motley MA, Carstens PH. Related Articles, Links

Turnover of cell wall in Listeria monocytogenes.
Carbohydr Res. 1982 Jun 1;104(1):147-52. No abstract available.
PMID: 6811135 [PubMed - indexed for MEDLINE]

☐ **92:** Koch AL, Higgins ML, Doyle RJ. Related Articles, Links

The role of surface stress in the morphology of microbes.
J Gen Microbiol. 1982 May;128 (Pt 5):927-45.
PMID: 6809889 [PubMed - indexed for MEDLINE]

☐ **93:** Doyle RJ, Nedjat-Haiem F, Miller RD, Keller KF. Related Articles, Links

Interaction between plant agglutinins and Legionella species.
J Clin Microbiol. 1982 May;15(5):973-5.
PMID: 6808023 [PubMed - indexed for MEDLINE]

☐ **94:** Davidson SK, Keller KF, Doyle RJ. Related Articles, Links

Differentiation of coagulase-positive and coagulase-negative staphylococci by lectins and plant agglutinins.
J Clin Microbiol. 1982 Apr;15(4):547-53.
PMID: 7068834 [PubMed - indexed for MEDLINE]

☐ **95:** Mobley HL, Doyle RJ, Streips UN, Langemeier SO. Related Articles, Links

Transport and incorporation of N-acetyl-D-glucosamine in Bacillus subtilis.
J Bacteriol. 1982 Apr;150(1):8-15.
PMID: 6174502 [PubMed - indexed for MEDLINE]

☐ **96:** Harding GB, Doyle RJ, Westphal U. Related Articles, Links

Specificity and stability of guinea pig anti-progesterone antibodies.
Mol Immunol. 1982 Feb;19(2):267-79.
PMID: 7099166 [PubMed - indexed for MEDLINE]

☐ **97:** Nesbitt WE, Doyle RJ, Taylor KG, Staat RH, Arnold RR. Related Articles, Links

Positive cooperativity in the binding of Streptococcus sanguis to hydroxylapatite.
Infect Immun. 1982 Jan;35(1):157-65. No abstract available.
PMID: 6172378 [PubMed - indexed for MEDLINE]

☐ **98:** Delivanis PD, Snowden RB, Doyle RJ. Related Articles, Links

Localization of blood-borne bacteria in instrumented unfilled root canals.
Oral Surg Oral Med Oral Pathol. 1981 Oct;52(4):430-2.
PMID: 6795558 [PubMed - indexed for MEDLINE]

☐ **99:** Thaniyavarn S, Singh S, Maynard CM, Taylor KG, Doyle RJ. Related Articles, Links

Amino sugars: a new class of inhibitors of dextransucrase.
Carbohydr Res. 1981 Oct 1;96(1):134-7. No abstract available.
PMID: 6170432 [PubMed - indexed for MEDLINE]

☐ **100:** Scharff TG, Badr M, Doyle RJ, Zaleski C. Related Articles, Links

Antagonism between salicylic acid and glucose in Saccharomyces cerevisiae.
Toxicol Appl Pharmacol. 1981 Sep 30;60(3):485-91. No abstract available.
PMID: 7027537 [PubMed - indexed for MEDLINE]

Display Summary Sort Save Text Clip Add Order
Show: 50 Items 51-100 of 162 Page 2 of 4 Select page: 1 2 3 4

NCBI PubMed National Library of Medicine NLM

PubMed Nucleotide Protein Genome Structure PopSet Taxonomy OMIM Books

Search PubMed for Doyle RJ[au] Go Clear

Limits Preview/Index History Clipboard Details

Display Summary Sort Save Text Clip Add Order

Show: 50 Items 101-150 of 162 Page 3 of 4 Select page: 1 2 3 4

Entrez PubMed

PubMed Services

Related Resources

☐ **101:** Jolliffe LK, Doyle RJ, Streips UN. Related Articles, Links
The energized membrane and cellular autolysis in Bacillus subtilis.
Cell. 1981 Sep;25(3):753-63.
PMID: 6793239 [PubMed - indexed for MEDLINE]

☐ **102:** Doyle RJ, Nesbitt WE, Alley T, Staat RH, Taylor KG. Related Articles, Links
Incorporation of 2-acetamido-2-deoxy-D-glucose into the peptidoglycan of Streptococcus mutans.
Carbohydr Res. 1981 Jul 1;93(2):308-11. No abstract available.
PMID: 7020938 [PubMed - indexed for MEDLINE]

☐ **103:** Kubitschek HE, Doyle RJ. Related Articles, Links
Growth delay induced in Escherichia coli by near-ultraviolet radiation: relationship to membrane transport functions.
Photochem Photobiol. 1981 May;33(5):695-702. No abstract available.
PMID: 7022490 [PubMed - indexed for MEDLINE]

☐ **104:** Koch AL, Higgins ML, Doyle RJ. Related Articles, Links
Surface tension-like forces determine bacterial shapes: Streptococcus faecium.
J Gen Microbiol. 1981 Mar;123(Pt 1):151-61.
PMID: 7320694 [PubMed - indexed for MEDLINE]

☐ **105:** White TB, Doyle RJ, Streips UN. Related Articles, Links
Transformation of a Bacillus subtilis L-form with bacteriophage deoxyribonucleic acid.
J Bacteriol. 1981 Feb;145(2):878-83.
PMID: 6780533 [PubMed - indexed for MEDLINE]

☐ **106:** Doyle RJ, Streips UN, Imada S, Fan VS, Brown WC. Related Articles, Links
Genetic transformation with cell wall-associated deoxyribonucleic acid in Bacillus subtilis.
J Bacteriol. 1980 Dec;144(3):957-66.
PMID: 6777372 [PubMed - indexed for MEDLINE]

☐ **107:** Doyle RJ, Matthews TH, Streips UN. Related Articles, Links
Chemical basis for selectivity of metal ions by the Bacillus subtilis cell wall.
J Bacteriol. 1980 Jul;143(1):471-80.
PMID: 6772632 [PubMed - indexed for MEDLINE]

☐ **108:** Stroupe SD, Doyle RJ. Related Articles, Links

Kinetic analysis of calcium binding to concanavalin A.
J Inorg Biochem. 1980 Apr;12(2):173-8.
PMID: 7441246 [PubMed - indexed for MEDLINE]

☐**109:** Nesbitt WE, Staat RH, Rosan B, Taylor KG, Doyle RJ. Related Articles, Links
Association of protein with the cell wall of Streptococcus mutans.
Infect Immun. 1980 Apr;28(1):118-26.
PMID: 7380560 [PubMed - indexed for MEDLINE]

☐**110:** Jolliffe LK, Doyle RJ, Streips UN. Related Articles, Links
Extracellular proteases modify cell wall turnover in Bacillus subtilis.
J Bacteriol. 1980 Mar;141(3):1199-208.
PMID: 6102558 [PubMed - indexed for MEDLINE]

☐**111:** Staat RH, Langley SD, Doyle RJ. Related Articles, Links
Streptococcus mutans adherence: presumptive evidence for protein-mediated attachment followed by glucan-dependent cellular accumulation.
Infect Immun. 1980 Feb;27(2):675-81. No abstract available.
PMID: 7380545 [PubMed - indexed for MEDLINE]

☐**112:** Meade NA, Staat RH, Langley SD, Doyle RJ. Related Articles, Links
Lectin-like activity from Persea americana.
Carbohydr Res. 1980 Jan 15;78(2):349-63.
PMID: 7353211 [PubMed - indexed for MEDLINE]

☐**113:** Schaefer RL, Keller KF, Doyle RJ. Related Articles, Links
Lectins in diagnostic microbiology: use of wheat germ agglutinin for laboratory identification of Neisseria gonorrhoeae.
J Clin Microbiol. 1979 Nov;10(5):669-72.
PMID: 94598 [PubMed - indexed for MEDLINE]

☐**114:** Glew RH, Doyle RJ. Related Articles, Links
Protection of sodium dodecyl sulfate-induced aggregation of concanalvalin A by saccharide ligands.
Carbohydr Res. 1979 Aug;73:219-26.
PMID: 476724 [PubMed - indexed for MEDLINE]

☐**115:** Horowitz S, Doyle RJ, Young FE, Streips UN. Related Articles, Links
Selective association of the chromosome with membrane in a stable L-form of Bacillus subtilis.
J Bacteriol. 1979 Jun;138(3):915-22.
PMID: 110772 [PubMed - indexed for MEDLINE]

☐**116:** Doyle RJ, Stroupe SD. Related Articles, Links
Perturbation of the calcium-binding site in concanavalin A by a saccharide ligand.
Carbohydr Res. 1978 Dec;67(2):545-8. No abstract available.
PMID: 728916 [PubMed - indexed for MEDLINE]

☐**117:** Doyle RJ, Stroupe SD. Related Articles, Links
Inhibition of concanavalin A by (ethylenedinitrilo) tetraacetic acid.
Carbohydr Res. 1978 Jul;64:327-33. No abstract available.
PMID: 98233 [PubMed - indexed for MEDLINE]

☐**118:** Horowitz S, Mansfield JM, Thomasson DL, Doyle RJ. Related Articles, Links
Immunobiological properties of a concanavalin A derivative.
Cell Immunol. 1978 Jun;38(1):214-8. No abstract available.
PMID: 667956 [PubMed - indexed for MEDLINE]

☐**119:** Doyle RJ, Smith CS, Cronholm LS. Related Articles, Links
Histamine hypersensitivity in mice induced by concanavalin A.
J Allergy Clin Immunol. 1978 Feb;61(2):108-14.
PMID: 621347 [PubMed - indexed for MEDLINE]

☐**120:** Staat RH, Doyle RJ, Langley SD, Suddick RP. Related Articles, Links
Modification of in vitro adherence of Streptococcus mutans by plant lectins.
Adv Exp Med Biol. 1978;107:639-47.
PMID: 742505 [PubMed - indexed for MEDLINE]

☐**121:** Crabb WD, Streips UN, Doyle RJ. Related Articles, Links
Selective enrichment for genetic markers in DNA released by competent cultures of Bacillus subtilis.
Mol Gen Genet. 1977 Oct 20;155(2):179-83.
PMID: 412055 [PubMed - indexed for MEDLINE]

☐**122:** Chatterjee AN, Doyle RJ, Streips UN. Related Articles, Links
A proposed functional role for bacterial N-acetylmuramyl-L-alanine amidases.
J Theor Biol. 1977 Oct 7;68(3):385-90. No abstract available.
PMID: 599942 [PubMed - indexed for MEDLINE]

☐**123:** Doyle RJ, Streips UN, Fan VS, Brown WC, Mobley H, Mansfield JM. Related Articles, Links
Cell wall protein in Bacillus subtilis.
J Bacteriol. 1977 Jan;129(1):547-9. No abstract available.
PMID: 401503 [PubMed - indexed for MEDLINE]

☐**124:** Doyle RJ, Kubitschek HE. Related Articles, Links
Near ultraviolet light inactivation of an energy-independent membrane transport system in Saccharomyces cerevisiae.
Photochem Photobiol. 1976 Sep;24(3):291-3. No abstract available.
PMID: 790415 [PubMed - indexed for MEDLINE]

☐**125:** Zeman GH, Rao GU, Doyle RJ. Related Articles, Links
A circular test pattern for evaluating x-ray tube focal spots.
Am J Roentgenol. 1976 Jun;126(6):1239-45.
PMID: 179388 [PubMed - indexed for MEDLINE]

☐**126:** Koch AL, Doyle RJ, Kubitschek HE. Related Articles, Links
Inactivation of membrane transport in Escherichia coli by near-ultraviolet light.
J Bacteriol. 1976 Apr;126(1):140-6.
PMID: 770419 [PubMed - indexed for MEDLINE]

☐**127:** Keller KF, Doyle RJ. Related Articles, Links
A mechanism for tobacco smoke-induced allergy.
J Allergy Clin Immunol. 1976 Mar;57(3):278-82.
PMID: 2631 [PubMed - indexed for MEDLINE]

☐ **128:** Doyle RJ, Thomasson DL, Nicholson SK. Related Articles, Links

Stabilization of concanavalin A by metal ligands.
Carbohydr Res. 1976 Jan;46(1):111-8.
PMID: 1248012 [PubMed - indexed for MEDLINE]

☐ **129:** Brown WC, Doyle RJ, Streips UN. Related Articles, Links

Comparison of various procedures for removing proteins and nucleic acids from cell walls of Bacillus subtilis.
Prep Biochem. 1976;6(6):479-88.
PMID: 826899 [PubMed - indexed for MEDLINE]

☐ **130:** Thomasson DL, Doyle RJ. Related Articles, Links

Monovalent concanavalin A.
Biochem Biophys Res Commun. 1975 Dec 15;67(4):1545-52. No abstract available.
PMID: 812504 [PubMed - indexed for MEDLINE]

☐ **131:** Doyle RJ, Chatterjee AN, Streips UN, Young FE. Related Articles, Links

Soluble macromolecular complexes involving bacterial teichoic acids.
J Bacteriol. 1975 Oct;124(1):341-7.
PMID: 240807 [PubMed - indexed for MEDLINE]

☐ **132:** Doyle RJ, Thomasson DL, Gray RD. Related Articles, Links

Spectral changes accompanying the interaction between metal ligands and concanavalin A.
FEBS Lett. 1975 Apr 1;52(2):185-7. No abstract available.
PMID: 1132473 [PubMed - indexed for MEDLINE]

☐ **133:** Doyle RJ, McDannel ML, Helman JR, Streips UN. Related Articles, Links

Distribution of teichoic acid in the cell wall of Bacillus subtilis.
J Bacteriol. 1975 Apr;122(1):152-8.
PMID: 804466 [PubMed - indexed for MEDLINE]

☐ **134:** Birdsell DC, Doyle RJ, Morgenstern M. Related Articles, Links

Organization of teichoic acid in the cell wall of Bacillus subtilis.
J Bacteriol. 1975 Feb;121(2):726-34.
PMID: 803488 [PubMed - indexed for MEDLINE]

☐ **135:** Doyle RJ, McDannel ML, Streips UN, Birdsell DC, Young FE. Related Articles, Links

Polyelectrolyte nature of bacterial teichoic acids.
J Bacteriol. 1974 May;118(2):606-15. No abstract available.
PMID: 4208136 [PubMed - indexed for MEDLINE]

☐ **136:** Kan TJ, Doyle RJ. Related Articles, Links

Mechanism of the formation of concanavalin A-teichoic acid complexes.
Carbohydr Res. 1973 Dec;31(2):401-4. No abstract available.
PMID: 4206131 [PubMed - indexed for MEDLINE]

☐ **137:** Thomasson DL, Mansfield JM, Doyle RJ, Wallace JH. Related Articles, Links

C-reactive protein levels in experimental African trypanosomiasis.
J Parasitol. 1973 Aug;59(4):738-9. No abstract available.
PMID: 4722595 [PubMed - indexed for MEDLINE]

☐ **138:** Doyle RJ, Nicholson SK, Gray RD. Related Articles, Links
Carbohydrate-induced conformational change in concanavalin A.
Carbohydr Res. 1973 Jul;29(1):265-70. No abstract available.
PMID: 4751278 [PubMed - indexed for MEDLINE]

☐ **139:** Kalsow CM, Doyle RJ. Related Articles, Links
Facilitated diffusion of monosaccharides in Saccharomyces cerevisiae: experimental investigation of kinetic parameters without the assumptions of symmetry.
J Bacteriol. 1973 Feb;113(2):612-8. No abstract available.
PMID: 4570600 [PubMed - indexed for MEDLINE]

☐ **140:** Doyle RJ. Related Articles, Links
Modification of bacteriophage phi 25 adsorption to Bacillus subtilis by concanavalin A.
J Bacteriol. 1973 Jan;113(1):198-202. No abstract available.
PMID: 4631705 [PubMed - indexed for MEDLINE]

☐ **141:** Doyle RJ, Birdsell DC, Young FE. Related Articles, Links
Isolation of the teichoic acid of Bacillus subtilis 168 by affinity chromatography.
Prep Biochem. 1973;3(1):13-8. No abstract available.
PMID: 4199049 [PubMed - indexed for MEDLINE]

☐ **142:** Doyle RJ, Birdsell DC. Related Articles, Links
Interaction of concanavalin A with the cell wall of Bacillus subtilis.
J Bacteriol. 1972 Feb;109(2):652-8. No abstract available.
PMID: 4621684 [PubMed - indexed for MEDLINE]

☐ **143:** Kalsow CM, Doyle RJ. Related Articles, Links
Facilitated diffusion of monosaccharides in Saccharomyces cerevisiae. I. Theoretical considerations of asymmetry.
J Theor Biol. 1972 Jan;34(1):125-33. No abstract available.
PMID: 4552768 [PubMed - indexed for MEDLINE]

☐ **144:** Doyle RJ, West R, Hobbs AG. Related Articles, Links
olid state switching in x-ray exposure circuits.
Br J Radiol. 1971 Mar;44(519):228. No abstract available.
PMID: 5548808 [PubMed - indexed for MEDLINE]

☐ **145:** Doyle RJ, Cronholm L. Related Articles, Links
A model antigen-antibody system for classroom use.
J Chem Educ. 1969 Dec;46(12):868-9. No abstract available.
PMID: 5356709 [PubMed - indexed for MEDLINE]

☐ **146:** Cronholm LS, Doyle RJ, Fishel CW. Related Articles, Links
Concanavalin A-induced sensitization of mice to histamine.
Proc Soc Exp Biol Med. 1969 Oct;132(1):88-90. No abstract available.
PMID: 4310181 [PubMed - indexed for MEDLINE]

☐ **147:** Doyle RJ, Woodside EE, Fishel CW. Related Articles, Links
Macromolecular interactions in organic solvents.
Life Sci. 1969 Sep 15;8(18):955-9. No abstract available.

PMID: 5346947 [PubMed - indexed for MEDLINE]

☐ **148:** Doyle RJ, Woodside EE, Fishel CW. Related Articles, Links

Anomalous protein-polysaccharide solubilities in trichloroacetic acid-ethanol solutions.

Life Sci. 1969 Feb 15;8(4):121-7. No abstract available.
PMID: 5777626 [PubMed - indexed for MEDLINE]

☐ **149:** Spoerl E, Doyle RJ. Related Articles, Links

Selective enhancement of glycolytic activity by incubation of yeast cells in sugars and polyols.

Can J Microbiol. 1968 Nov;14(11):1245-52. No abstract available.
PMID: 4302127 [PubMed - indexed for MEDLINE]

☐ **150:** Spoerl E, Doyle RJ. Related Articles, Links

Inhibition by methylphenidate of transport across the yeast cell membrane.

J Bacteriol. 1968 Sep;96(3):744-50. No abstract available.
PMID: 5732507 [PubMed - indexed for MEDLINE]

Display Summary Sort Save Text Clip Add Order

Show: 50 Items 101-150 of 162 Page 3 of 4 Select page: 1 2 3 4

Write to the Help Desk
NCBI | NLM | NIH
Department of Health & Human Services
Freedom of Information Act | Disclaimer

☐ **151:** Doyle RJ, Roholt OA. Related Articles, Links

Tyrosyl involvement in the concanavalin A-polysaccharide preciptin reaction.
Life Sci. 1968 Aug 15;7(16):841-6. No abstract available.
PMID: 5672306 [PubMed - indexed for MEDLINE]

☐ **152:** Spoerl E, Doyle RJ. Related Articles, Links

Intracellular binding of sugars by yeast cells after pre-incubation with sugars and polyols.
Curr Mod Biol. 1968 Jul-Aug;2(3):158-64. No abstract available.
PMID: 5667601 [PubMed - indexed for MEDLINE]

☐ **153:** Doyle RJ, Bello J. Related Articles, Links

Ultraviolet absorbance changes accompanying the denaturation of soluble collagen and antelocollagen.
Biochem Biophys Res Commun. 1968 Jun 28;31(6):869-76. No abstract available.
PMID: 5668182 [PubMed - indexed for MEDLINE]

☐ **154:** Doyle RJ, Bello J, Roholt OA. Related Articles, Links

Probable protein crosslinking with tetranitromethane.
Biochim Biophys Acta. 1968 Jun 26;160(2):274-6. No abstract available.
PMID: 4173111 [PubMed - indexed for MEDLINE]

☐ **155:** Doyle RJ, Spoerl E. Related Articles, Links

Sugar retention, cofactor levels, and leakage of metabolites in x-irradiated, starved yeast cells.
Radiat Res. 1968 May;34(2):326-34. No abstract available.
PMID: 4384802 [PubMed - indexed for MEDLINE]

☐ **156:** Doyle RJ, Woodside EE, Fishel CW. Related Articles, Links

Protein-polyelectrolyte interactions. The concanavalin A precipitin reaction with polyelectrolytes and polysaccharide derivatives.
Biochem J. 1968 Jan;106(1):35-40. No abstract available.
PMID: 5721469 [PubMed - indexed for MEDLINE]

☐ **157:** Spoerl E, Doyle RJ. Related Articles, Links

The influence of some hexitols and sugars on CO-2 production by starved and x-irradiated, starved yeast cells.
Can J Microbiol. 1967 Jul;13(7):811-7. No abstract available.
PMID: 6036885 [PubMed - indexed for MEDLINE]

☐ **158:** Doyle RJ, Burgan HM. Related Articles, Links

Use of ultraviolet absorption for determination of sugars.
Anal Biochem. 1966 Oct;17(1):171-4. No abstract available.
PMID: 5969570 [PubMed - indexed for MEDLINE]

☐ **159:** Woodside EE, Trott GF, Doyle RJ, Fishel CW. Related Articles, Links

Polyglucose-protein complexes.
Arch Biochem Biophys. 1966 Oct;117(1):25-33. No abstract available.
PMID: 4291341 [PubMed - indexed for MEDLINE]

☐ **160:** Woodside EE, Trott GF, Doyle RJ, Fishel CW. Related Articles, Links

Polyglucose-protein complexes.
Arch Biochem Biophys. 1966 Oct;117(1):125-33. No abstract available.
PMID: 4291340 [PubMed - indexed for MEDLINE]

☐ **161:** Spoerl E, Doyle RJ. Related Articles, Links

Glucose control of an x-radiation induced difference in CO-2 production by yeast cells.
Life Sci. 1965 Oct;4(19):1843-8. No abstract available.
PMID: 5848069 [PubMed - indexed for MEDLINE]

☐ **162:** Spoerl E, Doyle RJ, Thompson ME. Related Articles, Links

Limiting factors involved in CO2 production by starved and x-irradiated starved yeast cells.
J Cell Physiol. 1965 Apr;65(2):271-6. No abstract available.
PMID: 5834564 [PubMed - indexed for MEDLINE]

Display Summary Sort Save Text Clip Add Order
Show: 50 Items 151-162 of 162 Page 4 of 4 Select page: 1 2 3 4

Search Criteria:
Author: doyle, r

Results are shown in relevance ranked order. **To rephrase your existing search criteria**, press the "Back" button on your browser. [Help with Searching]

Search Results

Try this search in Antimicrob. Agents Chemother. || Appl. Environ. Microbiol. || Clin. Diagn. Lab. Immunol. || Clin. Microbiol. Rev. || Eukaryot. Cell || Infect. Immun. || J. Bacteriol. || J. Clin. Microbiol. || J. Virol. || Mol. Cell. Biol. || Microbiol. Mol. Biol. Rev. || All ASM Journals or other journals

Results 1 to 10 (of 13 found)
[View Next 3 Results]

To see an article, click its [HTML] or [PDF] link. **To review many abstracts**, check the boxes to the left of the titles you want and click the "Get All Checked Abstract(s)" button. **To see one abstract at a time**, click its [Abstract] link.

Clear | Get All Checked Abstract(s)

☐ Robyn M. **Doyle**, Nicholas P. Cianciotto, Shaila Banvi, Paul A. Manning, and Michael W. Heuzenroeder
Comparison of Virulence of *Legionella longbeachae* Strains in Guinea Pigs and U937 Macrophage-Like Cells
Infect. Immun. 2001 69: 5335-5344. [Abstract] [HTML] [PDF]

☐ M. M. Cowan, E. A. Horst, S. Luengpailin, and R. J. **Doyle**
Inhibitory Effects of Plant Polyphenoloxidase on Colonization Factors of *Streptococcus sobrinus* 6715
Antimicrob. Agents Chemother. 2000 44: 2578-2580. [Abstract] [HTML] [PDF]

☐ Adrienne W. Paton, Matthew C. Woodrow, Robyn M. **Doyle**, Janice A. Lanser, and James C. Paton
Molecular Characterization of a Shiga Toxigenic *Escherichia coli* O113:H21 Strain Lacking *eae* Responsible for a Cluster of Cases of Hemolytic-Uremic Syndrome
J. Clin. Microbiol. 1999 37: 3357-3361. [Abstract] [HTML] [PDF]

☐ Robyn M. **Doyle**, Trevor W. Steele, Alan M. McLennan, Ian H. Parkinson, Paul A. Manning, and Michael W. Heuzenroeder
Sequence Analysis of the *mip* Gene of the Soilborne Pathogen *Legionella longbeachae*
Infect. Immun. 1998 66: 1492-1499. [Abstract] [HTML] [PDF]

☐ AW Paton, RM Ratcliff, RM **Doyle**, J Seymour-Murray, D Davos, JA Lanser, and JC Paton
Molecular microbiological investigation of an outbreak of hemolytic- uremic syndrome caused by dry fermented sausage contaminated with Shiga- like toxin-producing Escherichia coli
J. Clin. Microbiol. 1996 34: 1622-1627. [Abstract] [PDF]

☐ Y Ma, MO Lassiter, JA Banas, MY Galperin, KG Taylor, and RJ **Doyle**
Multiple glucan-binding proteins of Streptococcus s brinus
J. Bacteriol. 1996 178: 1572-1577. [Abstract] [PDF]

☐ Q Wu, Q Wang, KG Taylor, and RJ **Doyle**

Subinhibitory concentrations of antibiotics affect cell surface properties of Streptoc ccus sobrinus
J. Bacteriol. 1995 177: 1399-1401. [Abstract] [PDF]

☐ MA Kemper, MM Urrutia, TJ Beveridge, AL Koch, and RJ **Doyle**
Proton motive force may regulate cell wall-associated enzymes of Bacillus subtilis
J. Bacteriol. 1993 175: 5690-5696. [Abstract]

☐ PD Bauer, C Trapp, D Drake, KG Taylor, and RJ **Doyle**
Acquisition of manganous ions by mutans group streptococci
J. Bacteriol. 1993 175: 819-825. [Abstract]

☐ M Urrutia Mera, M Kemper, R **Doyle**, and TJ Beveridge
The membrane-induced proton motive force influences the metal binding ability of Bacillus subtilis cell walls
Appl. Envir. Microbiol. 1992 58: 3837-3844. [Abstract]

Clear | Get All Checked Abstract(s)

To see an article, click its [HTML] or [PDF] link. **To review many abstracts**, check the boxes to the left of the titles you want and click the "Get All Checked Abstract(s)" button. **To see one abstract at a time**, click its [Abstract] link.

[View Next 3 Results]

Try this search in: Please select a journal: ▼ Search

Search Criteria:
Author: doyle, r

Search Criteria:
Author: doyle, r

Results are shown in relevance ranked order. **To rephrase your existing search criteria**, press the "Back" button on your browser. [Help with Searching]

Search Results

Results 11 to 13 (of 13 found)
[View Previous 10 Results]

To see an article, click its [HTML] or [PDF] link. **To review many abstracts**, check the boxes to the left of the titles you want and click the "Get All Checked Abstract(s)" button. **To see one abstract at a time**, click its [Abstract] link.

Clear | Get All Checked Abstract(s)

☐ Lu-Lu , JS Singh, MY Galperin, D Drake, KG Taylor, and RJ **Doyle**
Chelating agents inhibit activity and prevent expression of streptococcal glucan-binding lectins
Infect. Immun. 1992 60: 3807-3813. [Abstract]

DL Hasty, I Ofek, HS Courtney, and RJ **Doyle**
Multiple adhesins of streptococci
Infect. Immun. 1992 60: 2147-2152.

☐ J Lanser, M Adams, R **Doyle**, P Hewitt, and N Sangster
Genetic characterization of Legionella pneumophila serogroup 1 associated with respiratory disease in Australia
Appl. Envir. Microbiol. 1992 58: 706-708. [Abstract]

Clear | Get All Checked Abstract(s)

To see an article, click its [HTML] or [PDF] link. **To review many abstracts**, check the boxes to the left of the titles you want and click the "Get All Checked Abstract(s)" button. **To see one abstract at a time**, click its [Abstract] link.

[View Previous 10 Results]

Search Criteria:
Author: doyle, r

Infect. Immun., 09 1992, 3807-3813, Vol 60, No. 9

Chelating agents inhibit activity and prevent expression of streptococcal glucan-binding lectins

, JS Singh, MY Galperin, D Drake, KG Taylor and RJ Doyle
Department of Microbiology and Immunology, University of Louisville, Kentucky 40292.

Several of the cariogenic mutans streptococci produce cell wall- associated glucan-binding lectins (GBLs). The lectins bind alpha-1,6- linked glucans and have no affinity for other polysaccharides or anomeric linkages. When citrate or lactate was included in the growth medium, expression of the activities of the GBLs of Streptococcus cricetus and S. sobrinus was prevented. Furthermore, chelating agents, including citrate, lactate, EDTA, and acetylacetone, were able to reversibly inhibit glucan-induced aggregation of GBL+ streptococci. In addition, the chelating agents prevented sucrose-dependent streptococcal adhesion to glass surfaces and dispersed preformed adherent masses of the streptococci. Neither citrate nor other chelating agents modified the activities of glucosyltransferases. Expression of the lectin could only be achieved by the addition of manganous ion to the growth medium. Chloramphenicol and other metabolic inhibitors prevented synthesis of GBL in cells obtained from manganese- deficient medium and shifted to manganous ion-sufficient medium. The GBL may be a manganoprotein, the manganese of which may be perturbed, but not removed, by chelating agents. During synthesis of the GBL, manganous ion may be required in order for the protein to achieve an active conformation. Citrate or other chelating agents may have promise as anticaries agents.

Antimicrobial Agents and Chemotherapy, September 2000, p. 2578-2580, Vol. 44, No. 9
0066-4804/00/$04.00+0

Inhibitory Effects of Plant Polyphenoloxidase on Colonization Factors of *Streptococcus sobrinus* 6715

M. M. Cowan,[1,*] E. A. Horst,[1] S. Luengpailin,[2] and R. J. Doyle[2]

Department of Microbiology, Miami University, Oxford, Ohio 45056,[1] and Department of Microbiology and Immunology, Health Sciences Center, University of Louisville, Louisville, Kentucky 40292[2]

Received 10 January 2000/Returned for modification 13 April 2000/Accepted 13 June 2000

ABSTRACT

Top
Abstract
Text
References

Exogenously added polyphenoloxidase (EC 1.14.18.1), an enzyme which oxidizes tyrosine residues and is commonly found in many dietary components, abolished the aggregation of *Streptococcus sobrinus* 6715 by high-molecular-weight dextran. The enzyme decreased glucan-binding lectin and/or glucosyltransferase I activities.

TEXT

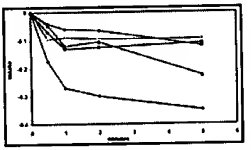
Top
Abstract
Text
References

In the past three decades, rapid progress has been made in the understanding of microbial adhesion (8). A wealth of research has established that *Streptococcus sobrinus* must attach to glucans deposited on the tooth surface for successful colonization of the oral cavity (4, 6, 17). For this purpose it uses a glucan-binding lectin (GBL) and a family of glucosyltransferases (GTFs). GTFs are composed of a C-terminal glucan-binding domain supplemented by an N-terminal catalytic peptide (7). Both GBL and GTFs have been shown to possess critical tyrosines in their glucan-binding sites (15). In this study we investigated the effect on adhesion of bacterial pretreatment with polyphenoloxidase (PPO) (EC 1.14.18.1). PPO is an enzyme found in many plant species, including most noncitrus European fruits and many vegetables (18). It possesses two activities, oxidizing a variety of phenolic substrates, including tyrosine, to L-dihydroxyphenylalanine and then to quinones. This action results in browning when it occurs in fruits, such as apples and bananas. Plants and invertebrates may use the PPO system, with its resultant tannin production, as a defense against invasion by predators, such as fungi and insects (11,

12).

S. sobrinus 6715 was maintained and grown either on tryptic soy agar or in the defined medium of Terleckyj et al. (16). The standard rate assay of Drake et al. (3) was used to study the interaction of *S. sobrinus* 6715 GBL with high-molecular-weight dextran. Briefly, bacterial suspensions were mixed with dextran T-2000 (10 μg/ml), and the decrease in optical density was continuously monitored spectrophotometrically for 5 min. Absorption at 540 nm was used to calculate $\ln(A/A_0)$ (A, observed optical density; A_0, optical density at time zero), which was plotted versus time in minutes. Each sample was assayed in triplicate. For enzyme treatments, cells were incubated with PPO (from mushrooms; Worthington Biochemical Corporation, Freehold, N.J.) (180 to 1,260 U/ml) for 1 h at 37°C.

Figure 1 depicts the decrease in absorption for control and PPO-treated (464 U/ml) *S. sobrinus* 6715 after mixing with glucan (T-2000). Bacteria in this experiment were grown in complex medium. Cells grown in defined medium required sevenfold-lower concentrations of PPO for inhibition (data not shown). PPO pretreatment reduced aggregate formation to approximately the level seen when a competitive binding inhibitor, low-molecular-weight glucan (dextran T-10), was included in the reaction (Fig. 1). When dextran T-10 was added to cells before enzyme treatment, the action of PPO was blocked. Addition of glycogen prior to PPO treatment had no effect on PPO's activity.

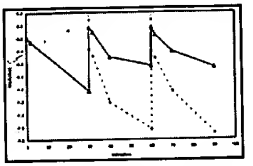


View larger version (14K):
[in this window]
[in a new window]

FIG. 1. Inhibition of aggregation of *S. sobrinus* by high-molecular-weight dextran after treatment with PPO. High-molecular-weight dextran (dextran T-2000) was added as a last step in all tubes. ♦, control (*S. sobrinus*); ×, low-molecular-weight dextran (T-10) plus *S. sobrinus*; ●, *S. sobrinus* pretreated with PPO; ▲, dextran T-10 added to *S. sobrinus* before PPO treatment; ■, glycogen added to *S. sobrinus* before PPO treatment. Experiments were performed in triplicate.

The following known PPO inhibitors prevented the enzyme from abolishing aggregation of *S. sobrinus* by glucan: EDTA (5 mM), 100% decrease in PPO activity; potassium chloride (200 mM), 100% decrease; polyvinylpyrrolidone (500 μg/ml), 100% decrease; ascorbic acid (3 mM), 100% decrease; and lactic acid (10% [wt/vol]), 91% decrease. Protease inhibitors, phenylmethylsulfonyl fluoride (500 μM) and leupeptin (500 μg/ml), were also tested to ensure that the activity was not due to possible contaminating proteases in the enzyme batches. Neither decreased the action of PPO. Incubation of inhibitors with *S. sobrinus* had no effect on control glucan-dependent aggregation. All inhibitors were from Sigma.

PPO was mixed (by gentle vortexing) with *S. sobrinus*-glucan complexes after 30 min of control aggregation (Fig. 2). Reformation of aggregates was significantly retarded with respect to the control bacteria. After another 30 min the complexes were vortexed again (to disrupt aggregates) with no further addition of PPO. PPO-containing tubes continued to show slower and less complete aggregation, suggesting either that PPO enzymatically altered the binding site or that it bound with a higher affinity than dextran.



View larger version (13K):
[in this window]
[in a new window]

FIG. 2. Prevention of reaggregation of *S. sobrinus* by addition of PPO. ■, control, *S. sobrinus* plus glucan T-2000; ▲, *S. sobrinus* plus glucan T-2000 plus PPO. Arrow 1 shows when PPO was added with vortexing, and arrow 2 shows when the complexes were vortexed with no further addition of PPO. Experiments were performed in triplicate.

Growth vessel pellicle formation, mediated by the combined activity of GTFs and GBL (17), was investigated. Bacteria were inoculated into 5-ml tubes of tryptic soy broth with and without sucrose (200 mM) and/or PPO (1.0 mg/ml). After 18 h of growth, tubes were emptied, stained with crystal violet, and visually examined. Only PPO-containing cultures produced no pellicles in the presence of sucrose (data not shown).

The ability of PPO to reduce the activity of partially purified GTFs was assayed as follows. PPO-treated (50 U/ml) and untreated crude GTFs obtained through ammonium sulfate precipitation of *S. sobrinus* culture supernatant were subjected to nondenaturing electrophoresis in polyacrylamide. The presence of glucan-binding bands was demonstrated by incubating duplicate gels in fluorescein isothiocyanate-conjugated glucan T-10 (2 mg/ml). GTF activity was assayed by incubating gels in sucrose followed by development with Schiff's reagent. Of four discrete bands which bound glucan, two (molecular weight, 145,000 and 135,000) demonstrated GTF activity. The higher-molecular-weight band, corresponding to the reported size (15) of GTF-I (an isoenzyme producing insoluble glucan), lost activity after incubation with PPO. Glucan-binding activity has been shown to reside both on glucan-binding proteins (with no catalytic activity) and on the C-terminal end of GTFs (5, 7, 15). Further study is needed to determine which of the family of glucan-binding proteins is affected by PPO. A combination of GBL and GTF-I inhibition could have a potentially powerful effect on oral ecology.

Disk diffusion (100 U of PPO) and broth dilution assays (in tryptic soy broth) of PPO (highest PPO concentration = 464 U/ml) showed that PPO did not prevent growth of *S. sobrinus* (data not shown).

PPO is a copper-requiring metalloenzyme. Therefore, metal-chelating agents have been found to be inhibitory to its activity (19). The PPO inhibition by EDTA, ascorbic acid, and lactic acid seen in this study supports this finding and suggests that naturally occurring chelators, such as lactic acid manufactured by oral streptococci, could have similar effects in vivo and could conceivably be an adaptive response by the bacteria to the constant presence of dietary PPO originating in fruits and vegetables. Various studies report that persons consuming large quantities of fruits and vegetables do indeed have lower caries rates (10). It is plausible, based on the present results, that PPO may play some role as an anticaries agent.

There are many examples of the importance of tyrosine in carbohydrate-binding sites of microbial proteins (1, 2, 9, 13, 14, 20, 21). If tyrosine is indeed a "consensus" residue necessary for the specific binding of multiple microbial pathogens to host tissues, alteration of tyrosine could represent a broad-spectrum approach to the prevention and interruption of microbial attachment and biofilm formation.

ACKNOWLEDGMENTS

This project was supported by funding from Genencor International and NIDCR to R.J.D. and M.M.C. and by the Miami University Office for the Advancement of Science and Teaching (M.M.C.).

FOOTNOTES

* Corresponding author. Mailing address: Department of Microbiology, Miami University, Oxford, OH 45056. Phone: (513) 727-3231. Fax: (513) 727-3367. E-mail: cowanmm@muohio.edu.

REFERENCES

Top
Abstract
Text
References

1. **Cornelissen, C. N., J. E. Anderson, and P. F. Sparling.** 1997. Characterization of the diversity and the transferrin-binding domain of gonococcal transferrin-binding protein 2. Infect. Immun. **65:**822-828[Abstract].
2. **Doyle, R. J., and O. A. Roholt.** 1967. Tyrosyl involvement in the concanavalin A-polysaccharide precipitin reaction. Life Sci. **7:**841-846.
3. **Drake, D., K. G. Taylor, A. S. Bleiweis, and R. J. Doyle.** 1988. Specificity of the glucan-binding lectin of *Streptococcus cricetus*. Infect. Immun. **56:**1864-1872[Medline].
4. **Gibbons, R. J., and R. J. Fitzgerald.** 1969. Dextran-induced agglutination of *Streptococcus mutans*, and its potential role in the formation of microbial dental plaques. J. Bacteriol. **98:**341-346[Medline].
5. **Jespersgaard, C., G. Hajishengallis, T. E. Greenway, D. J. Smith, M. W. Russell, and S. M. Michalek.** 1999. Functional and immunogenic characterization of two cloned regions of *Streptococcus mutans* glucosyltransferase I. Infect. Immun. **67:**810-816[Abstract/Full Text].
6. **Koga, T., H. Asakawa, N. Okahashi, and S. Hamada.** 1986. Sucrose-dependent cell adherence and cariogenicity of serotype c *Streptococcus mutans*. J. Gen. Microbiol. **132:**2873-2883[Medline].
7. **Mooser, G., and C. Wong.** 1988. Isolation of a glucan-binding domain of glucosyltransferase (1,6-α-glucan synthase) from *Streptococcus sobrinus*. Infect. Immun. **56:**880-884[Medline].
8. **Ofek, I., and R. J. Doyle.** 1994. Bacterial adhesion to cells and tissues. Chapman and Hall, New York, N.Y.
9. **Quiocho, F. A.** 1986. Carbohydrate-binding proteins: tertiary structures and protein-sugar interactions. Annu. Rev. Biochem. **55:**287-315[Medline].
10. **Rahmatulla, M., and E. E. Guile.** 1990. Relationship between dental caries and vegetarian and non-vegetarian diets. Community Dent. Oral Epidemiol. **18:**277-278[Medline].
11. **Ratcliffe, N. A.** 1985. Invertebrate immunity for the non-specialist. Immunol. Lett. **10:**253-270[Medline].
12. **Scalbert, A.** 1991. Antimicrobial properties of tannins. Phytochemistry **30:**3875-3883[CrossRef].
13. **Schembri, M. A., L. Pallesen, H. Connell, D. L. Hasty, and P. Klemm.** 1996. Linker insertion analysis of the FimH adhesin of type 1 fimbriae in an *Escherichia coli* FimH-null background. FEMS

analysis of the FimH adhesin of type 1 fimbriae in an *Escherichia coli* FimH-null background. FEMS Microbiol. Lett. **137:**257-263[CrossRef][Medline].

14. **Singh, J. S., K. G. Taylor, and R. J. Doyle.** 1993. Essential amino acids involved in glucan-dependent aggregation of *Streptococcus sobrinus*. Carbohydr. Res. **244:**137-147[Medline].
15. **Smith, D. J., W. F. King, C. D. Wu, B. I. Shen, and M. A. Taubman.** 1998. Structural and antigenic characteristics of *Streptococcus sobrinus* glucan binding proteins. Infect. Immun. **66:**5565-5569[Abstract/Full Text].
16. **Terleckyj, B., N. P. Willett, and G. D. Shockman.** 1975. Growth of several cariogenic strains of oral streptococci in a chemically defined medium. Infect. Immun. **11:**649-655[Medline].
17. **Vacca-Smith, A. M., A. R. Venkitaraman, R. G. Quivey, Jr., and W. H. Bowen.** 1996. Interactions of streptococcal glucosyltransferases with α-amylase and starch on the surface of saliva-coated hydroxyapatite. Arch. Oral Biol. **41:**291-298[Medline].
18. **Vamos-Vigyazo, L.** 1981. Polyphenol oxidase and peroxidase in fruits and vegetables. Crit. Rev. Food Sci. Nutr. **15:**49-127[Medline].
19. **Walker, J. R. L.** 1975. Enzymic browning in food. Enzyme Technol. Dig. **4:**89.
20. **Weis, W., J. H. Brown, S. Cusak, J. C. Paulson, J. J. Skehel, and D. C. Wiley.** 1988. Structure of the influenza virus haemagglutinin complexed with its receptor, sialic acid. Nature **333:**426-431[Medline].
21. **Wright, C. S.** 1984. Structural comparison of the two distinct sugar binding sites in wheat germ agglutination isolectin II. J. Mol. Biol. **178:**91-104[Medline].

Antimicrobial Agents and Chemotherapy, September 2000, p. 2578-2580, Vol. 44, No. 9
0066-4804/00/$04.00+0

- Abstract of this Article
- **Reprint (PDF) Version of this Article**
- Similar articles found in:
  AAC Online
  PubMed
- PubMed Citation
- Search Medline for articles by:
  Cowan, M. M. || Doyle, R. J.
- Alert me when:
  new articles cite this article
- Download to Citation Manager

- Books from ASM Press

HOME HELP FEEDBACK SUBSCRIPTIONS ARCHIVE SEARCH
Clin. Diagn. Lab. Immunol. | Clin. Microbiol. Rev.
J. Clin. Microbiol. | ALL ASM JOURNALS